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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,038	01/20/2004	Junichi Hayashi	CFA00043US.	3926

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Canon U.S.A. Inc.
Intellectual Property Department
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EXAMINER

WANG, JIN CHENG

ART UNIT PAPER NUMBER

2672

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/762,038	HAYASHI, JUNICHI	
	Examiner	Art Unit	
	Jin-Cheng Wang	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claim 17 recites "a program". The claim 17 further recites an intended purpose "for causing a computer to execute the image-processing method." The program as recited in the claim 17 may be found in a printed material for an intended purpose. Therefore, the "program" set forth in the claim 17 does not render a useful and tangible result or a practical result. It is not clear whether the recited "program" is just a "flow chart" printed on a piece of paper.

According to MPEP 2106, the claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Given the absence of any practical effect or significant independent physical acts, the applicants' claim fails to adequately define the claimed invention within the domain of patentable subject matter.

Claim 18 is subject to the same rationale of rejection set forth in the claim 17.

Claim 19 further recites "a computer-readable medium which stores the program". However, the program is only for an intended purpose and is not actually implemented as computer program codes. The claim 19 does not render a useful and tangible result and therefore is rejected for the reasons cited in above.

The claim 20 is subject to the same rationale of rejection set forth in the claim 19.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17-20 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. "A computer program on a computer readable medium executing machine readable instructions" is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

For example, each of the claims 17-20 only recites a program, it cannot be determined whether the program is found on a floppy disk sitting there doing nothing yet or is intended for the purpose of causing the computer implementing the image-processing method. Moreover, it is

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not clear whether the program is a computer program. Finally, the “program” as recited in each of the claims 17-18 may be found on a piece of paper such as a “flow chart” printed on a piece of paper.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-20 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claims 17-20 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in applicant’s specification, page 29, which recites a “flowchart” for describing the image-processing method or process, rather than the “program” as recited in the claims 17-20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsunoshita US 2003/0179412 A1 (hereinafter Matsunoshita).

Re Claims 1, 7, 12, 16, 21, 27:

Matsunoshita teaches an image-processing apparatus which expresses images as bit map data having a latent image area and a background area in order to discourage illegal copying of images, the image-processing apparatus comprising:

An image generator which generates a new image by expressing the latent image area (*It is not clear what applicant means by the latent image in view of the prior art of record because the latent image may be the latent image of the prior art embedded in the background image or the latent image may be a part of the document image of the prior art; in this Office Action, both situations are addressed*) with dots of a first dot size and the background area with dots of a second dot size which is different from the first dot size (*e.g., the relatively large dots outside the latent image are faithfully reproduced, but relatively small dots within the latent image characters cannot be faithfully copied by the copying machine; moreover, the document image and the background image containing a number of pattern images may have dots of different sizes; Figs. 3-4, 6(A)-6(B), Paragraph 0005, 0016, 0021, 0027, 0066, 0100, 0101; the background image is generated having a size smaller than the document image; Paragraph 0160*);

An information-attaching unit which receives additional information (*e.g., the received additional information may be the PDL information of Paragraph 0075 or may be either stems from the embedded code information in the background image or the additional information retrieved from the internal memory, e.g., the machine number, user ID and password stored in the internal ROM; Paragraphs 0125-0127, or the contents of the condition information with the information registered in the internal memory; Paragraph 0157; based on the additional*

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information received from the internal memory, the control part 32 analyzes the condition information represented by the condition code to permit or inhibit copying of the image; and by the template matching technique of Paragraph 0133 and the judgment is made whether the document image is a copy inhibition document of Paragraph 0149 based on the embedded information in the background image) capable of distinguishing an original image from a copy (e.g., Paragraph 0162, 0165);

Wherein the information-attaching unit then attaches the additional information to at least the latent image area of the image generated by the image generator (*e.g., the additional information such as the embedded code information such as the contents of the condition information, the copy inhibition code are reconstructed as a background image and thereby being attached to the background image wherein the background image includes a latent image. Moreover, the background image including the additional information is also attached to the document image in compositing; see Paragraph 0016, 0021, 0027, 0051, 0054, 0066, 0072, 0081, 0083, 0088, 0093, 0099-0106, 0109, 0117, 0124-0127, 0132-0133, 0145-0147, 0155-0165, 0198-0204, 0209-0211).*

Re Claims 2, 8, 13, 34 and 37:

Matsunoshita further discloses the relatively large dots outside the latent image and the relatively small dots within the latent image characters and the background image is generated having a size smaller than the document image (Paragraph 0101, 0109, 0160).

Re Claims 3 and 14:

Matsunoshita further discloses each of the dots includes two or more pixels (Paragraph 0068-0069, 0089).

Re Claims 4 and 9:

Matsunoshita further discloses controlling the position of each of the dots included in the latent image area in accordance with a bit value at the corresponding bit position in the additional information (*Paragraph 0068-0069, 0089; specifically, one pixel of the latent image character image is selected to be substantially equal in size to one pattern image and black pixels of the latent image may be arrayed in the size units of the pattern image corresponding to the copy inhibition information and condition information. Accordingly, when embedding the latent image character in the background image, each black pixel of the latent image character is embedded in a size unit or an array unit of the pattern image and thereby the dot position in the latent image may be arrayed according to the size units of the pattern image; controlling the size of dots in the latent image also controls the position of dots*).

Re Claims 5 and 10:

Matsunoshita further discloses controlling the size of each of the dots included in the latent image area in accordance with a bit value at the corresponding bit position in the additional information (*Paragraph 0068-0069, 0089; specifically, one pixel of the latent image character image is selected to be substantially equal in size to one pattern image and black pixels of the latent image may be arrayed in the size units of the pattern image corresponding to the copy inhibition information and condition information. Accordingly, when embedding the latent image character in the background image, each black pixel of the latent image character is embedded in a size unit or an array unit of the pattern image and thereby the dot position in the latent image may be arrayed according to the size units of the pattern image*).

Re Claims 6, 11 and 15:

Matsunoshita further discloses a composite image being generated by the image generator (*e.g., the composite image generating part 50 of Paragraph 0073*).

Re Claims 17-20:

Matsunoshita further discloses a program and the computer-readable storage medium to execute the image-processing method (Figs. 4, 8, 1012, 13, 18(A)-18(B) and 19 and Page 17).

Re Claims 22 and 32:

Matsunoshita further discloses a bit train of the two-dimensional code or the binalized data including a bit array with the noise component (Page 13 and Figs. 12-13, 16(A)-16(B)) and that the inside of the latent image character is formed with a dot pattern image containing small dots arrayed randomly and densely (Paragraph 0100).

Re Claims 23 and 33:

Matsunoshita further discloses the embedded information including a copy inhibition mark as compared with a registered mark or pattern (Paragraph 0005) which includes a digital signature of textual information (*e.g., Figs. 6(A)-6(B)*).

Re Claim 24:

Matsunoshita further discloses expressing the image of the printed material with a plurality of dots (in which the latent image is converted into an isolated dot pattern; Paragraph 0068-0069, 0096, 0100-0101) and reading the embedded information based on a displacement direction of a first dot from an original position (Page 8).

Re Claims 25-26:

Matunoshita further discloses representing the displacement of the plurality of dots in the as a vector since the encoded condition information is expressed in the form of a two-

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dimensional array and the area size is preferably about $\frac{1}{4}$ or smaller of the entire image in the vertical and horizontal directions and thus displacements of the two-dimensional arrays are corrected according to given rules for the two-dimensional array, see for example, Page 7-8).

Re Claims 28-30:

Matsunoshita further discloses the embedded information being attached to the first region and the second region (e.g., Paragraph 0100-0101).

Re Claim 31:

Matsunoshita further discloses the document image being a copy if the embedded image cannot be extracted (Paragraph 0100-0101 and Figs. 6(A)-6(B)).

Re Claims 35-36, 38-40:

Matunoshita further discloses attaching the embedded information based on a displacement of the plurality of dots in the first region or second region and based on first or second predetermined rules (e.g., data trains or bit trains are developed according to predetermined rules with the displacement being the periphery of the condition code array; see for example, Page 7-8).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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